

# Editorial: Gender and Psychiatry

Gender differences of psychiatric disorders have long been recognized: prevalence rates in women exceed those of men for a number of disorders. Gender differences between men and women exist in the epidemiology, risk factors, presenting symptoms, course of illness, treatment response, and prognosis of psychiatric conditions (1). Not all differences can be explained by physiologic variation; for example, the greater frequency of eating disorders in women may represent a sociocultural effect, with body weight affecting a self-image to a far greater degree than a man (2). On the other hand, men may abuse substances to manage emotional response that are discouraged or viewed as unacceptable in men. Comorbid medical conditions are more likely in women, including thyroid disease, migraine and fibromyalgia (1).

Sex differences in schizophrenia are one of the most consistently reported aspects of the disease. They are described in almost all features of the illness from prevalence, incidence and mean age at onset, clinical presentation and course, and in the response to treatment. Whether and how women and men with schizophrenia differ is one of the most interesting as well as clinically relevant topics in schizophrenia research (3).

Evidence suggests sex differences in schizophrenia reflect differences in both neurodevelopmental processes and social effects on disease risk and course. Male: female incidence approximates 1.4:1 but at older onset women predominate, so prevalence differences appear smaller (4, 5)

Gender differences have often been described regarding psychopathological symptoms in chronic schizophrenia and first-episode psychosis (FEP) patients, although methodologically sound studies could not always confirm this (6). In a new study from the Basel *FePsy Früherkennung von Psychosen* – early detection of psychosis clinic psychiatric symptoms were assessed not only in 87 FEP patients but also in 117 patients with an at risk mental state (ARMS) for psychosis (7). This is a novel approach, especially as most of them were antipsychotic free. In addition to observer-rated scales also a self-report scale was used. Results were controlled for the influence of age, medication and cannabis use. As often described in the literature, women had higher scores in positive psychotic symptoms, while men had higher scores in negative symptoms. However, the differences did not withstand correction for multiple testing. Thus, there do not seem to be

any major gender differences in psychopathology, either in ARMS or in FEP patients as regards self-reported or observer-rated symptoms when correction for multiple testing and potential confounders is performed (8, 9).

Gender differences can be explained also by physiologic variation, as for example the influence of hormones on mood. Reproductive psychiatry is a specialty that helps women deal with psychiatric conditions that develop in relation to specific points in their reproductive life cycle, such as their menstrual cycle, pregnancy and menopause (1, 10)

Pregnancy and postpartum related mental health issues continue to be a public health burden all over the world (11). Research shows that women are often distressed by depressive, anxiety and occasionally psychotic disorders in the perinatal period, thus challenging the notion that the child bearing experience is a time of uninterrupted joy, contentment and gratification. Despite the high rate of prevalence of depressive and anxiety disorders, estimated to be 12% (12) and 8.5% (13) respectively, in perinatal women, the associated stigma acts as a barrier which prevents afflicted women from seeking or receiving help. Women are reluctant to accept any psychiatric diagnosis in pregnancy or postpartum, owing to the shock, fear, rejection and dishonor that accompanies mental illness. Hence, delay in diagnosis and late intervention appears to be the rule. In some cultures, denial of this illness in the mother is widespread. Resultant chronicity of the condition with ongoing disability in overall functioning is commonly encountered.

The morbidity and mortality associated with maternal mental illness is of significance as it can result in complicated mother-infant attachment (14). Sophisticated research on antenatal psychiatric disorders and its adverse impact in utero is presently of particular interest to researchers. Biological and psychological markers have been shown to be altered in the fetuses exposed to severe antenatal mood and anxiety disorders (15). Oberlander's paper on fetal physiology and maternal affect denotes an important milestone in the advancement of maternal-fetal medicine as it relates to mental health issues (16). Psychiatric illness during the perinatal period has been shown to exert short- as well as long-term negative effects on the developing baby, the newborn and the child (17). Research in this particular area seems to be evolving speedily over the past two decades.

The transition into motherhood with its attendant anxiety can be overwhelming to the mother and often masks the underlying pathological perinatal mental illness. Early identification and screening is advocated at many centers whereby women at risk can be closely monitored. Among the several risk factors that have been thus far recognized, genetic, biological and psychosocial vulnerabilities appear to play an important role in the onset and perpetuation of perinatal psychiatric disorders. Additional risk factors include: unwanted pregnancy, lack of partner and family support, low socioeconomic class, chronic medical conditions and substance abuse (18). Prior trauma and birth-related complications such as difficult labor or surgical interventions can trigger flashbacks, intrusive memories, negative perceptions and anxiety/ mood changes. Shlomi Polachek and colleagues describe postpartum depression and Post Traumatic Stress Disorder in their paper which requires careful attention (19).

The obvious concern that arises after a psychiatric diagnosis has been established is the availability of safe, effective and affordable interventions for the anguished mother. Involving a significant other in the treatment plan and dealing with the woman's concerns compassionately will aid compliance. Another essential way in which the communication between the clinician and the woman can be enhanced is by establishing mutual consensus, thus sharing the process of management. The treatment issue has been in the forefront of treating physicians' minds, particularly in the last ten years with controversial research on the use of psychotropic medications in pregnancy and the postpartum. The Federal Drug Administration and Health Canada advisories have triggered apprehension. Women are reluctant to access suitable pharmacological interventions despite severity of their illness. Women's perception of teratogenic effects is also an important area as described by Koren (20); it has been developing rapidly as research in this field gains momentum. Long term studies on biobehavioral teratogenicity with antenatal medication exposure show positive results (21). While research demonstrates relapse of symptoms with medication discontinuation (22), prescribing psychotropic medications to pregnant and lactating women appears to be weighed down with concern and hesitation. Current research in relation to perinatal medication use is conflict-ridden at best. Lorenzo and Einarson's paper (23) therefore will serve as guide to physicians and boost confidence in reinstating medications when deemed appropriate. The exposure of the developing fetus to the medications versus the maternal mental illness continues to be a clinical conundrum for the treating clinician.

Comorbid disorders such as Obsessive Compulsive Disorder or Generalized Anxiety Disorder in their severe forms appear to be resistant to conventional treatment and require multiple modalities of management. Polypharmacy, although not recommended, is often necessary to control severe Anxiety Disorders or psychotic symptoms in pregnancy. In addition to the use of antidepressants, the use of atypical antipsychotics in complex, comorbid psychiatric conditions is not uncommon. Pirec and colleagues (24) describe the use of an atypical antipsychotic medication in antenatal women, an area with sparse data.

It is ideal to combine psychological as well as pharmacological therapies for an optimal outcome in moderate-to-severe psychiatric conditions. More knowledge exists at present with regards to the effectiveness of individual psychotherapy (25). Although not extensive, the data on group therapy appears to show successful results if administered in an appropriate manner (26, 27). Bowen et al.'s paper introduces innovative group therapy techniques for perinatal women in Saskatchewan, Canada (28). Several perinatal centers in Canada are embracing group intervention with excellent outcome.

This gender specific perinatal mental health issue will require a massive campaign to bring it into the limelight. It remains a neglected medical reality in many parts of the world. Public awareness and education are the key to minimize shame and promote early intervention. In the light of rapidly accumulating data on the adverse effects of persistent, relapsing mental illness on the mother and her child, maintaining emotional stability in the perinatal period is absolutely mandatory. While the gap between recognition and treatment still remains wide, increased understanding, improved clinical care, growing research and investment of funds by appropriate agencies in some countries appears to offer hope and optimism in the lives of mentally ill mothers.

Gender differences have been noted also in pharmacodynamics of medications. The optimal dose range of a therapeutic medication may not be the same for women as for men. "Standard" treatment, when applied to women, works less well than for men because it has largely been tested on male animals in the laboratory and on male research subjects in the clinic (29).

Women may require lower doses of medications than men, even when adjusted for body weight, due to hormonal influences on blood drug levels. The use of exogenous hormones (oral contraceptive, hormone replacement therapy) may additionally influence levels of medications.

Men and women differ also in the side effects of medications (30).

We need to understand that beyond the need to better understand psychiatric disease is the clinical responsibility to provide individualized, optimally effective, gender-specific care to all patients (31).

Only recently, medical research has started to understand the importance of taking gender into account as the symptoms and responses to medical treatment may be very different between sexes.

Gender-based medicine is the field of medicine that studies the biological and physiological differences between the human sexes and how that affects differences in disease (32).

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